

David Garrett & Associates

Engineering and Geology



December 7, 2008

Ms. Donna Wilson
NC DENR Division of Waste Management
Solid Waste Section
401 Oberlin Road
Raleigh, North Carolina, 27611

Fac/Perm/Co ID #	Date	Doc ID#
<i>mjcho</i>	03130109	DIN 7113

**RE: Recalculation of Initial Financial Assurance
A-1 Sandrock C&D Landfill Phase 1
Greensboro (Guilford County), North Carolina
Solid Waste Permit No. 41-17**

Dear Ms. Wilson:

On behalf of A-1 Sandrock, Inc., I am pleased to present the following recalculation of the initial financial assurance requirements relative to Phase 1. The recalculation, which was performed pursuant to our telephone conversation of December 4, 2008 and the current rule requirements for financial assurance to be posted for those portions of the facility that have received a Permit to Operate (PTO), seeks to establish the amount of a closure/post-closure bond sufficient for Phase 1 of the facility. This recalculation is based on the June 2008 document, Closure and Post-Closure Plan with Financial Assurance Calculation, which was prepared pursuant to Rule .0547. A-1 Sandrock desires the Solid Waste Section's timely approval of the Financial Assurance documentation for Phase 1, so they may pursue bonding or other financial assurance instruments.

Brief Regulatory History

The initial site application and Permit to Construct (PTC) application was submitted in 2003. A PTC was granted by the Section in February 2004 but construction was delayed. A new Permit to Construct for a revised Phase 1, comprising approximately 11.2 acres of the 25.5-acre footprint, was granted in June 2006. The first cell (Phase 1A) was built between June 2006 and January 2007, along with the sediment basin, surface ditches and other erosion control measures, the scales and scale house, and an access road across an unnamed tributary. An application for the PTO, documenting the construction of Phase 1A and the initial ground water sampling, was submitted to the Solid Waste Section for review ca. March 2007. A permit application for a C&D Treatment and Processing facility, to be operated in conjunction with the C&D landfill (within the facility boundary) was submitted in September 2007. A revised Operations Plan meeting the requirements of 15A NCAC 13B .0505 (1) – (12) was submitted ca. February 2008.

At the present time, A-1 Sandrock awaits the Solid Waste Section's approval of the Financial Assurance documentation and the Permit to Operate. Meanwhile, Cell 1C (within Phase 1) is undergoing excavation to the approved base grades; Cell 1B has not yet been graded. It is anticipated that all three cells will be graded and operated within the initial 5-year operational cycle, consistent with the permit application documents.

Revised Closure Cost Estimate

The following calculation is prorated from the June 2008 Closure and Post-Closure Plan document, which had projected final closure costs for the entire 25.5 acre footprint. Under the current Operations Plan, the footprint of Phase 1 will occupy 11.2 acres, and the balance of the entire acreage will be built in two subsequent 5-year permitting cycles, namely Phase 2 (9.5 acres) and Phase 3 (4.8 acres). Phase 4 will extend over portions of all three previous phases (as a vertical expansion), but other portions of the previous phases will be incrementally closed as exterior slopes approach the permitted final grades. According to the Solid Waste Rules, the Financial Assurance requirements must be recalculated on a yearly basis to account for portions of the footprint being closed and new areas being opened.

TABLE 1A
ESTIMATED FINAL CLOSURE COSTS FOR PHASE 1 (in 2008 dollars)

Topsoil (18" over 11.2 ac)*	29,814 c.y.	@	\$3.25 / cubic yard	\$96,896
Compacted Soil Barrier**	31,170 c.y.	@	\$8 / cubic yard	\$249,356
Seed and Mulch	11.2 acres	@	\$1,300 per acre	\$ 14,560
Storm Water Piping***	400 LF	@	\$10.00 / LF	\$ 4,000
CQA	11.2 acres	@	\$4,500 per acre	\$50,400
Total Construction Cost (if contracted out)***				\$ 415,212

*No permeability requirement; assume a shrinkage factor of 10% (which is conservative)

**Maximum permeability of 1×10^{-5} cm/sec, 18 inches thick; assume a shrinkage factor of 15%.

***Preliminary estimates, subject to verification.

Cost assumes on-site soils will meet permeability of 1×10^{-5} cm/sec.

The foregoing assumes all soils will be derived on-site.

Revised Post Closure Cost Estimate

The following calculation is prorated from the June 2008 Closure and Post-Closure Plan document, which had projected final closure costs for the entire 25.5 acre footprint. The revised calculation assumes post-closure care for just Phase 1, i.e., 11.2 acres, but monitoring of the entire ground water monitoring network has been assumed. Over time, monitoring requirements might be curtailed, depending on the data, and subject to approval by the Solid Waste Section.

TABLE 1B
ESTIMATED POST-CLOSURE COSTS FOR PHASE 1A (in 2008 dollars)


Annual Events	Units		Unit Cost	Cost/Event	Annual Costs
Reseeding/mulching and erosion repair (Assume 5% cap, once per year)	0.6	ac.	\$1,600	\$960.00	\$960.00
Mow final cap (twice per year)	11.2	ac.	\$25	\$280.00	\$560.00
Ground Water (semi-annual, 5 wells)	5	ea.	\$400	\$2000.00	\$4000.00
Surface Water (semi-annual, 3 locations)	3	ea.	\$350	\$1,050.00	\$2,100.00
Water quality analysis and reporting	1	ea.	\$2500	\$2500.00	\$5000.00
Engineering inspection (annual basis)	1	ea.	\$3,500	\$3,500.00	\$3,500.00
Maintain storm water conveyances	1	ea.	\$2,000	\$2,000.00	\$2,000.00
Maintain access roads, gates, buildings	1	ea.	\$1,000	\$1,000.00	\$1,000.00
Total Cost for One Year					\$19,120.00

SUMMARY OF CLOSURE AND POST-CLOSURE COSTS

1.	Final Closure Construction (see Table 1A)	\$415,212
2.	Projected Post-Closure Costs (see Table 1B * 30)	\$573,600
TOTAL CLOSURE/POST-CLOSURE COST – Phase 1		\$988,812

At this time, I believe A-1 Sandrock, Inc., has met all relevant criteria required in the rules and, on behalf of A-1 Sandrock, I request that the Solid Waste Section issue a Permit to Operate for a 5-year period. I would look forward to meeting with representatives of the Solid Waste Section, if needed, to review these calculations. Please contact me if I can provide any additional data.

Sincerely,



G. David Garrett, P.G., P.E.
Consulting Engineer